

# CSI Program Forum

**May 16, 2012**

Webex: <http://tinyurl.com/8xo469j>

Audio: : Phone number: 218-862-1300

Participant code: 971732



# California **Solar** Initiative

## Agenda

- Welcome & Introductions
- CSI Data
  - Program Statistics
  - CSI Incentive Steps: Where are we now?
  - CSI Cost: moving towards a sustainable market
- CPUC Regulatory Update
- SCE Interconnection Discussion
- SDG&E Interconnection Discussion
- CSI Program Process Improvement and Program Changes
- Lunch – Offsite



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# California **Solar** Initiative

## Agenda Continued

- M&O Update
- M&E Update
  - Status of Reports and Studies
- Low Income Update
  - SASH
  - MASH
- Q&A
- Break
- CSI-Thermal Update
  - CSI-Thermal Metrics
  - Low-Income CSI-Thermal Program Launch
  - Proposed Decision - Inclusion of Other Thermal Technologies
  - CALSEIA PTM- Incentive Increase
  - Statewide Marketing Launch
- Q&A
- Closing Comments and Adjourn



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# California **Solar** Initiative

## Regulatory Update

James Loewen  
Energy Division CPUC



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## Net Energy Metering (NEM) Cap:

- CPUC issued a Proposed Decision (PD) on April 11, 2012
- PD clarifies the definition of “customer aggregate peak demand” used to calculate the NEM cap.
  - Utilities’ current method: based on system-peak demand
  - PD’s proposed method: denominator is non-coincident peak
  - PD will change the number of MW installed under the NEM cap.
- Parties have filed comments on the PD
- A final CPUC vote is scheduled for May 24 meeting.



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## Cost Cap Modification

- Currently, “soft cap” is at 12 month System Average + S.D., which is now at \$9.72 per watt
- Above the soft cap, a High Cost Justification Form (HCJF) is required
- In April, Energy Division issued Draft Resolution E-4476
- It proposes:
  - separate caps for systems above and below 10 kW
  - each is set at rolling 12 month average (of host customer-owned systems), plus \$1.
- Parties have provided comments
- Final Resolution is scheduled for CPUC vote on May 24



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## Contact Info

James Loewen

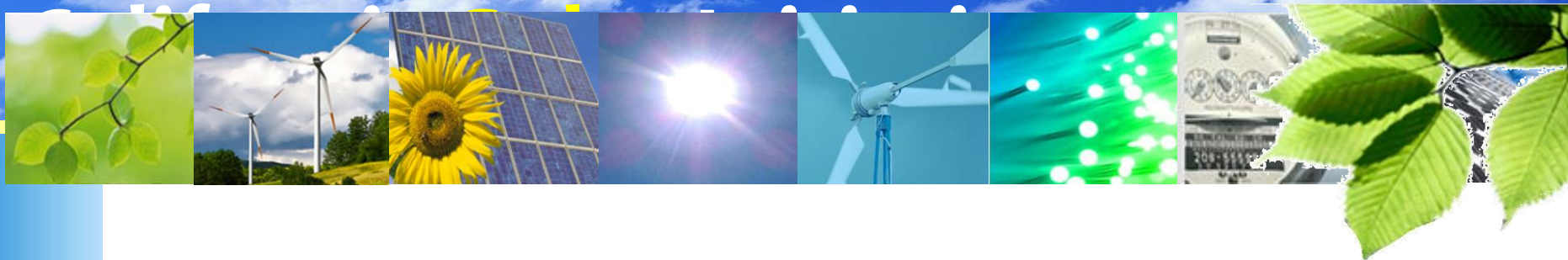
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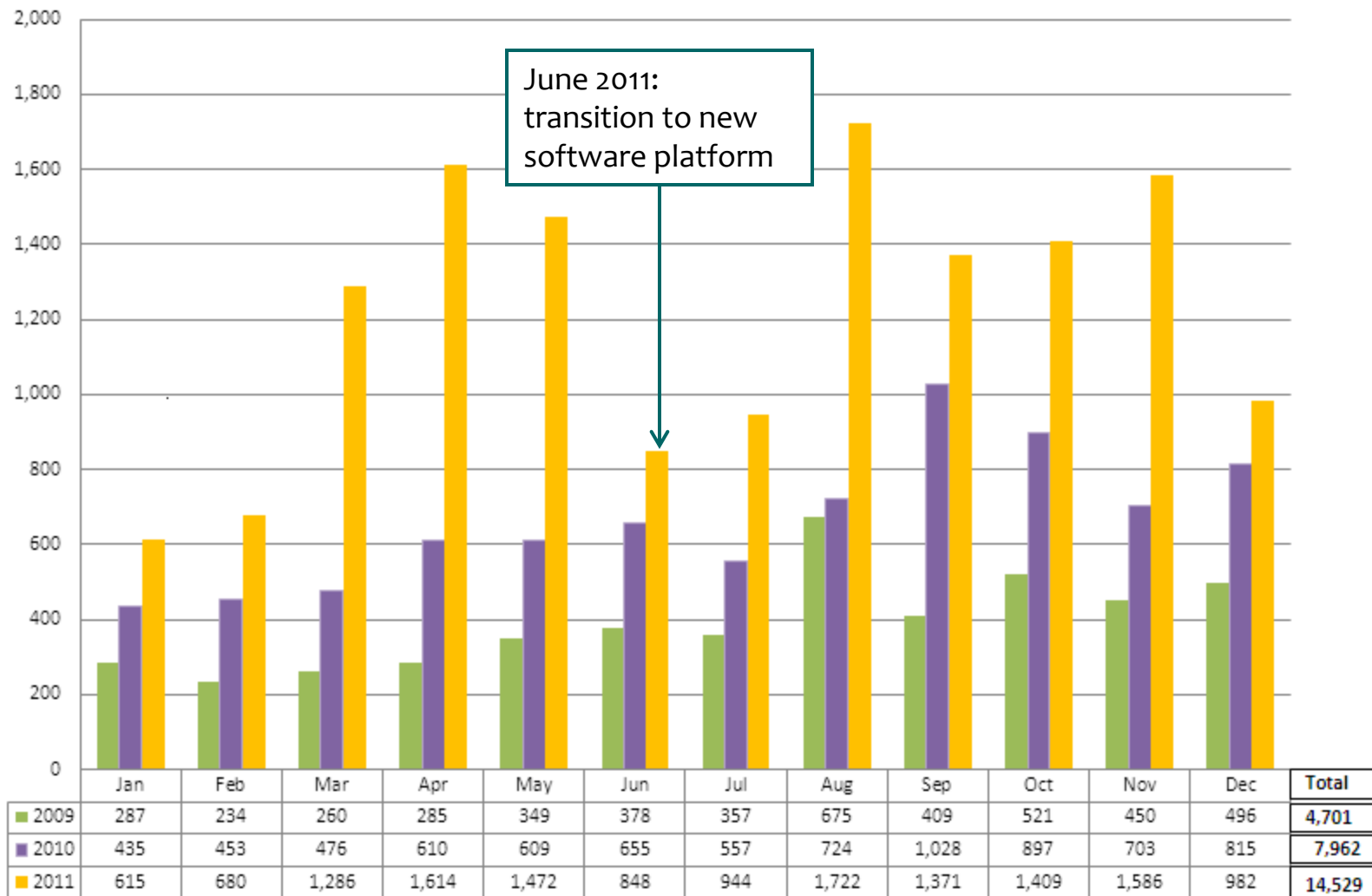


# Net Energy Metering





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## NEM Enrollment Delays

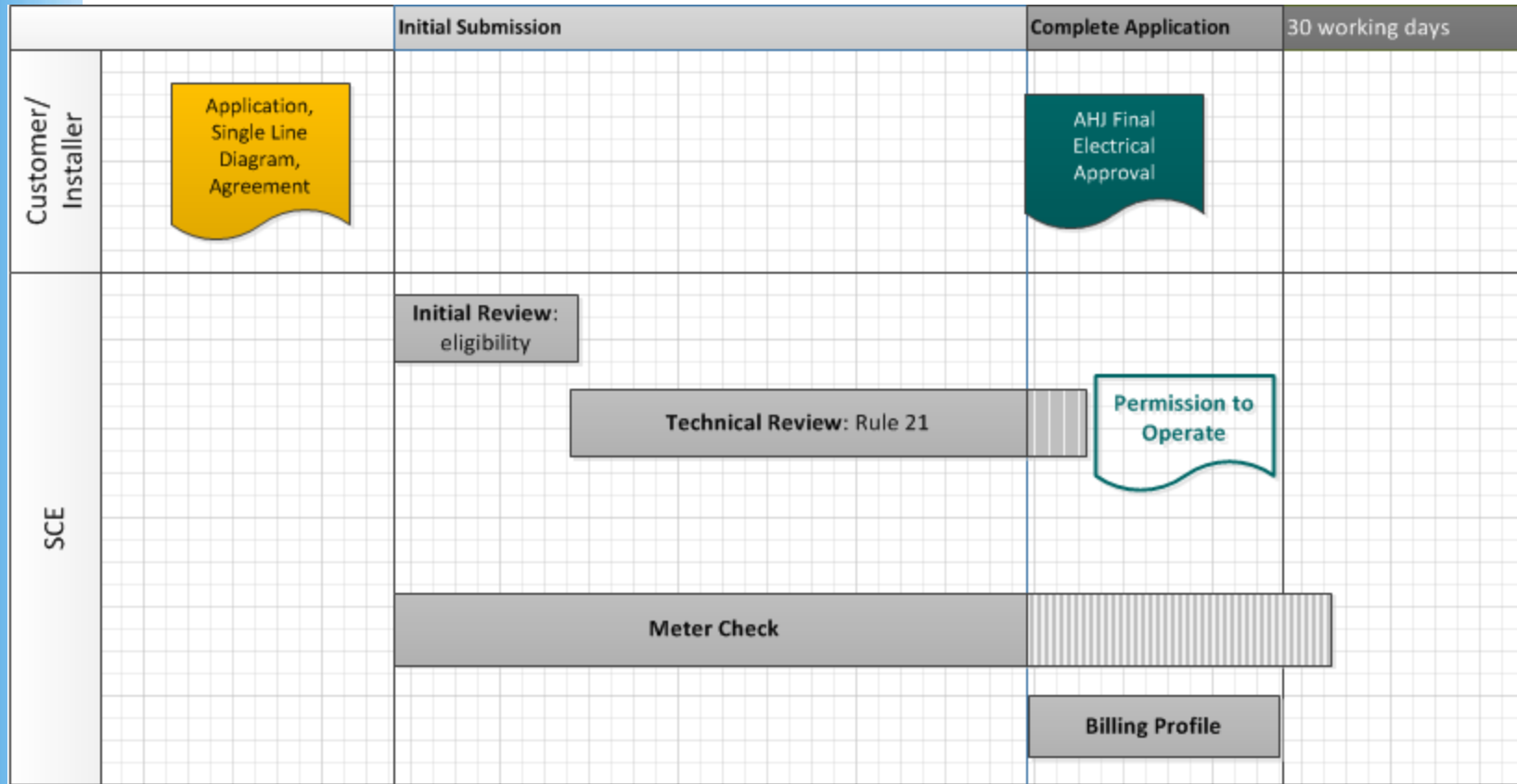
- # of projects that exceeded 30 working day goal:
  - Q4 2011: 1,568 projects (40% of total)
  - Q1 2012: 185 projects (15% of total)
- When enrollment exceeds 30 working days, SCE applies a credit based on estimated generation back to the 30 working day date.



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When commissioning test is required, it is scheduled after receipt of the AHJ sign-off.



If the NEM-compatible meter is not in place within 30 working days of the date SCE receives a Complete Application, a credit based on estimated generation is applied back to the 30-day date.



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## Ongoing Continuous Improvement

- On-line NEM Application Tool (Feasibility Stage)
  - Web-based interface for applicants to:
    - Submit applications and upload required documents
    - Check status of pending NEM projects
  - By eliminating manual data entry, the Tool is projected to reduce NEM cycle time by 5 working days, and reduce staff time required per application by 50%.



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## SDG&E Interconnection Discussion



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## CSI Program Process Improvement and Program Changes



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## Measurement and Evaluation Update

James Loewen  
Energy Division CPUC



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# California **Solar** Initiative

## Technical Potential for Local Distributed PV in CA

Consultant: E3

Published March 2012

- Distinguishes “local distributed PV” (LDPV allows **no backflow past substation**) from “distributed PV” (less than 20 MW).
- LDPV is easier to integrate into the grid.
- Finds potential for 15,000 incremental MW by year 2020
- Greater than 50% would be on rooftops
- By 2020 48% of power would be renewable, and rates would be 15 to 18% higher.
- Engineering hurdles include islanding, voltage regulation
- Current Rule 21 (15% cap for each local loop) would limit potential to 7,000 MW



# California Solar Initiative

## CSI Impact Evaluation 2010 Addendum to Final Report

Consultant: Itron

Published April 2012

- PV Performance over Time.
  - Quantifies effects of ownership, incentive type, and module material on PV performance over time using two different methods.
  - Provides estimates of PV degradation for each of those groupings.
  - Results range from 0% to 2% per year degradation
  - Third party owned systems perform statistically significantly better
  - Short time span of data limits reliability of results
- Analysis of Interval Billing Data.
  - Uses new data from PG&E territory to expand the interval billing analysis previously included in the 2010 CSI Impact Evaluation.



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## Upcoming Studies

- Market Transformation Study
  - Will include overview plus a look at roofing impacts and impact of third party ownership model
  - RFP issued in May 2012
- DG Impacts Study
  - Pursuant to AB 578 – biennial study
  - RFP sent in Q1 2012
  - Proposals received and reviewed by Energy Division
- CSI Impact Evaluation 2011-12
  - Comprehensive review of program impacts
  - Energy Division and Program Administrators currently drafting RFP





# California **Solar** Initiative

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# California **Solar** Initiative

## SASH Program Update

### GRID Alternatives



Presenter: Cathleen Monahan,  
SASH Program Officer  
5/16/2012



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Web: [www.gridalternatives.org/sash](http://www.gridalternatives.org/sash)



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# California Solar Initiative

## GRID Alternatives

**Mission:** To empower communities in need by providing renewable energy and energy efficiency services, equipment, and training.



- SASH Program Manager
- Non-profit 501(c)(3) organization
- Licensed solar electrical contractor
- Installation model centered around workforce development



# California **Solar** Initiative

## SASH Program

### GRID Locations

- GRID has 7 regional offices serving all IOU territories
  - Oakland: serves greater Bay area/N. California
  - Carson: serves greater L.A.
  - Fresno: serves Central Valley
  - San Diego: serves San Diego area
  - San Luis Obispo: serves Central Coast
  - Riverside: serves Inland Empire
  - Chico: serves North Central Valley



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# California **Solar** Initiative

## SASH Program

### A Comprehensive Low-Income Solar Program

- Higher incentives than general market
- CSI Program
- Energy Efficiency
- Workforce Development
- Volunteers and Community Engagement



GRID Alternatives



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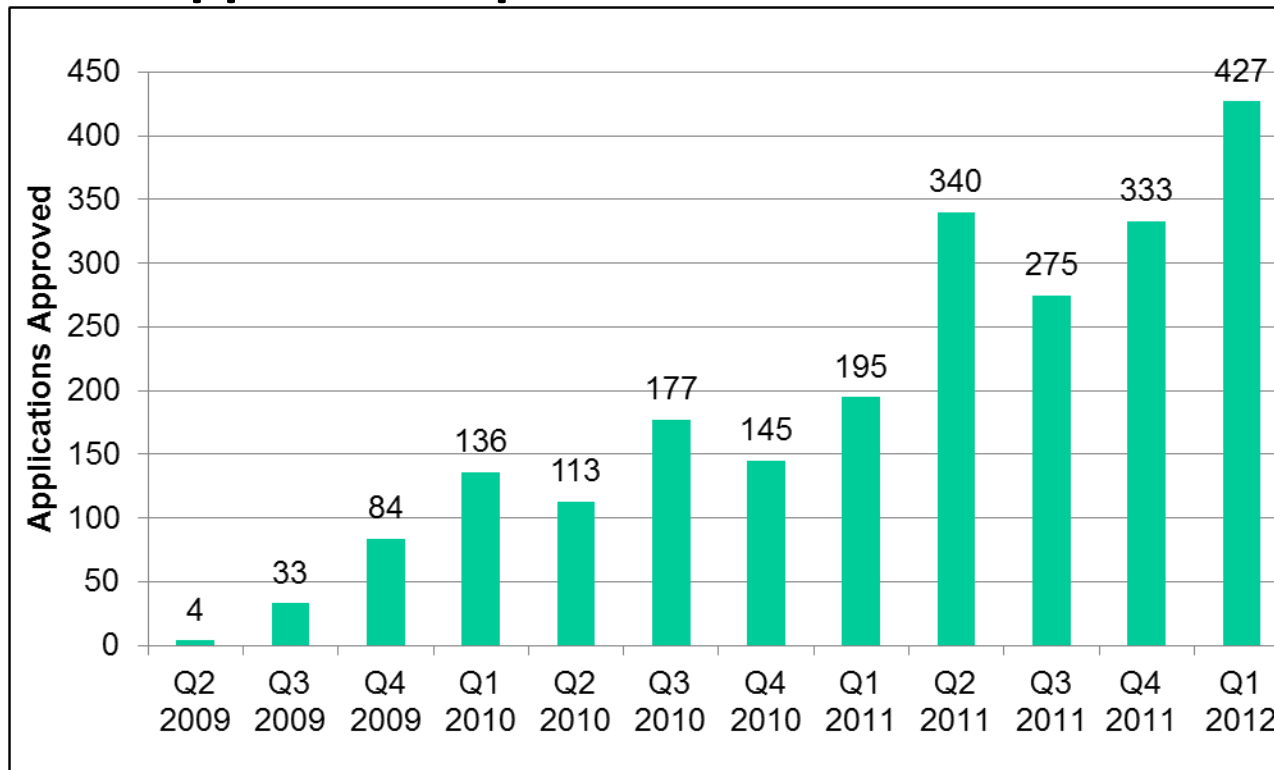




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## SASH Program

### SASH Applications per Quarter



GRID Alternatives



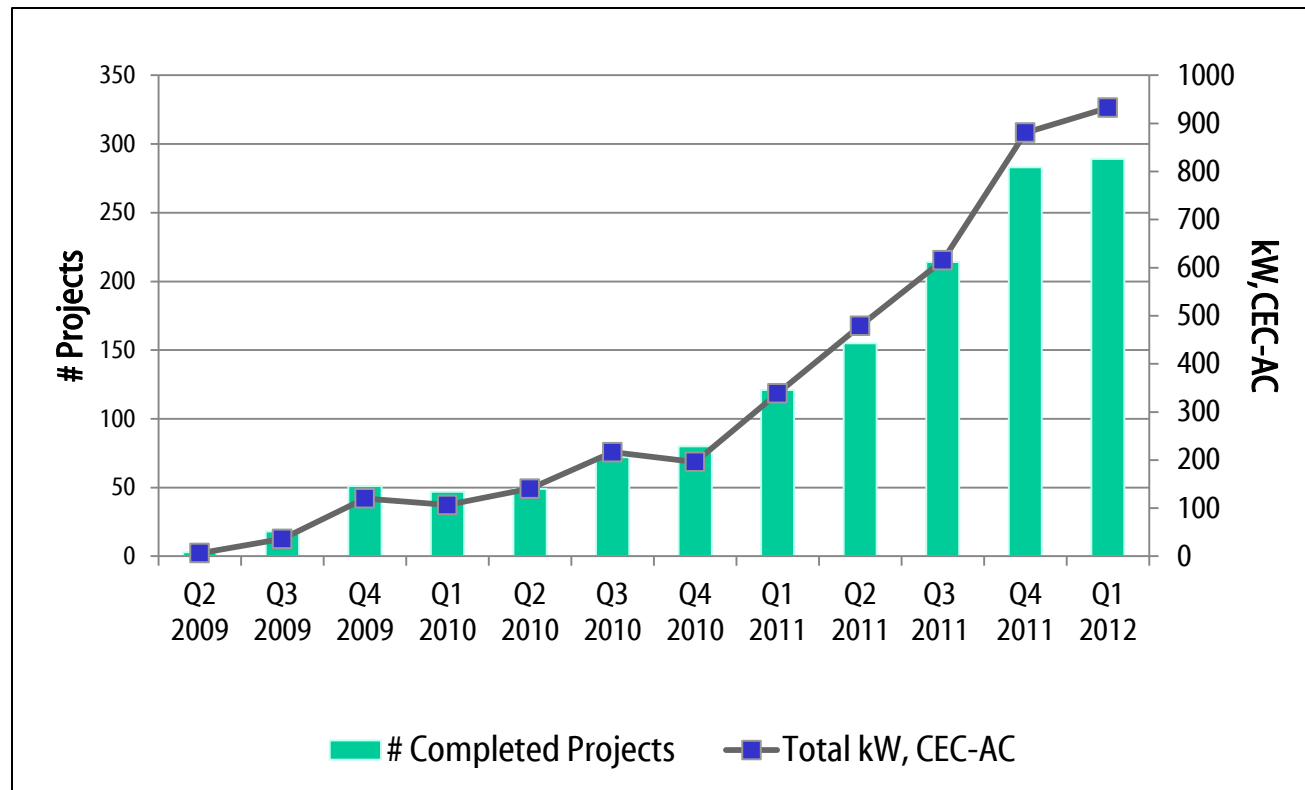
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## SASH Program

### Completed and Interconnected Projects



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# California Solar Initiative

## SASH Program

Applications by Status and Service Territory (thru Q1 2012)



Application Status	Number of Applications				Total kW, (CEC-AC)	Total Incentives, \$ millions
	PG&E	SCE	SDG&E	Totals		
STEP 1: Applications under review	238	177	46	461	1,336.9*	\$8.02*
STEP 2: Confirmed Applications/ Reservations	200	130	17	347	1,201.2	\$7.51
STEP 3: Completed/Installed	733	525	190	1448	4,332.2	\$27.19
<b>TOTALS</b>	<b>1171</b>	<b>832</b>	<b>253</b>	<b>2256</b>	<b>6,870.3</b>	<b>\$42.72</b>



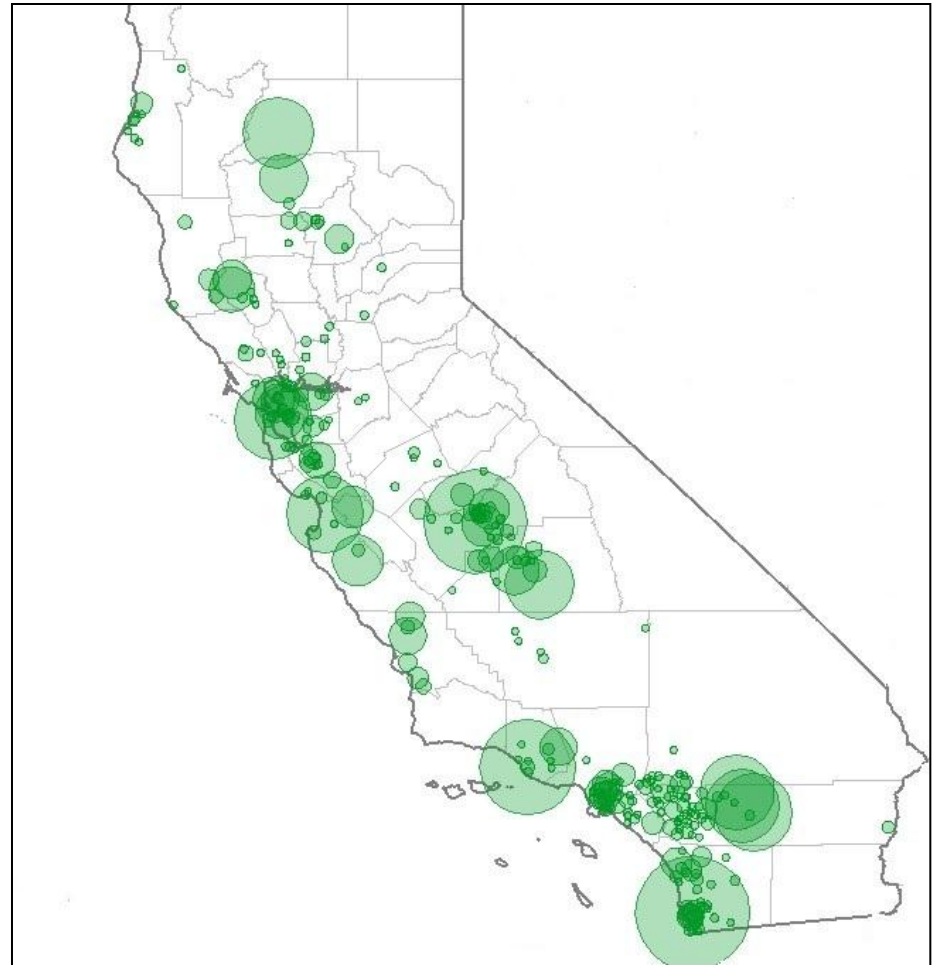
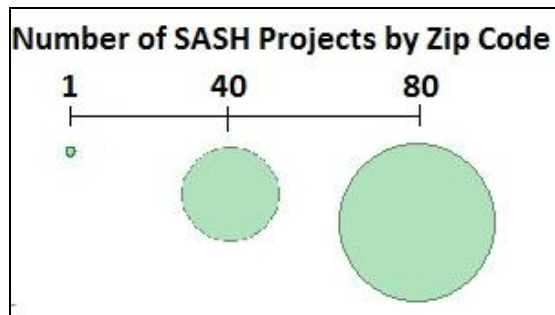
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## SASH Program

### Location of All SASH Applications by Zip Code



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# California **Solar** Initiative

## SASH Program

### Longer-term Impact

- Install PV- solar electric systems for 4,000-6,000 low-income CA families thru 2016
- Utilize Sub-Contractor Partnership Program to meet installation targets
- Create market transformation by providing opportunities for green jobs training, and help foster a sustainable solar industry in CA





# California **Solar** Initiative

## SASH Program

### Thank You

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Sign up for GRID's newsletter!

[www.gridalternatives.org/sash](http://www.gridalternatives.org/sash)



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# Multifamily Affordable Solar Housing Program Update

May 16, 2012



# California **Solar** Initiative

## California Public Utilities Commission (CPUC) Program Goals

- Stimulate adoption of solar power in the affordable housing sector
- Improve energy utilization and overall quality of affordable housing through application of solar and energy efficiency technologies
- Decrease electricity use and costs without increasing monthly household expenses for affordable housing building occupants
- Increase awareness and appreciation of the benefits of solar among affordable housing occupants and developers



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# California **Solar** Initiative

## Current Program Status

- **CCSE:** Fully Allocated with \$2.8 million on waitlist. Not accepting new applications at this time.
- **SCE:** Currently accepting applications, limited funding remains of \$50,000. A waitlist will be available once the remaining incentive budget is allocated.
- **PG&E:** Program re-opened on 5/14/2012 with \$4.6 million available for incentives and received 29 applications totaling \$10.5 million. The waitlist is currently open for those who want to submit an application.



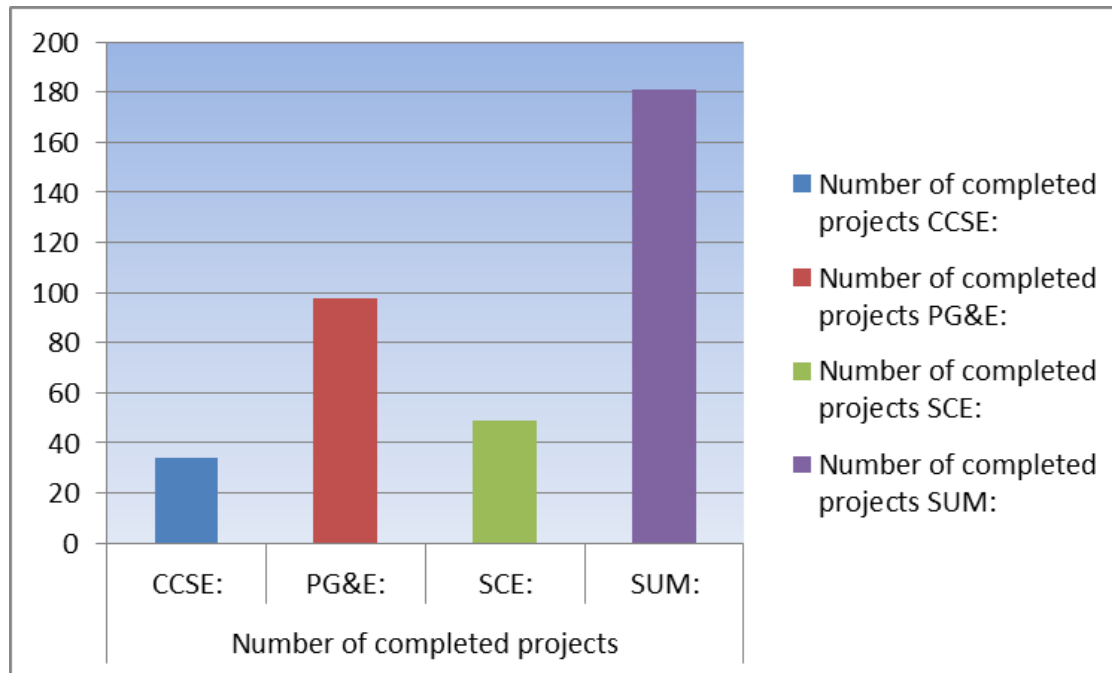
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# California **Solar** Initiative

## Projects Completed Statewide: 181



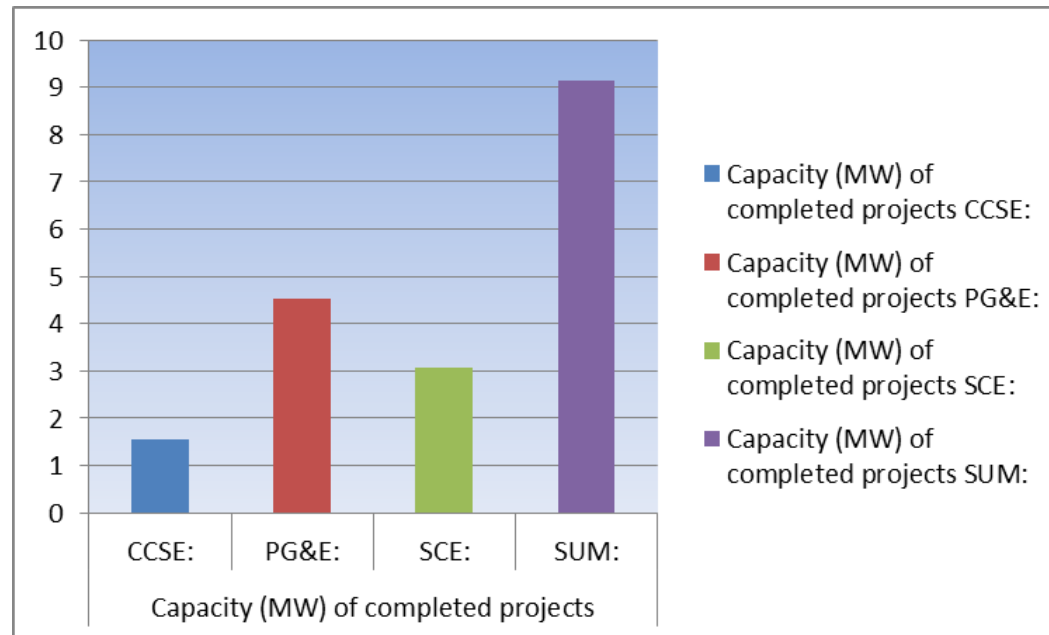
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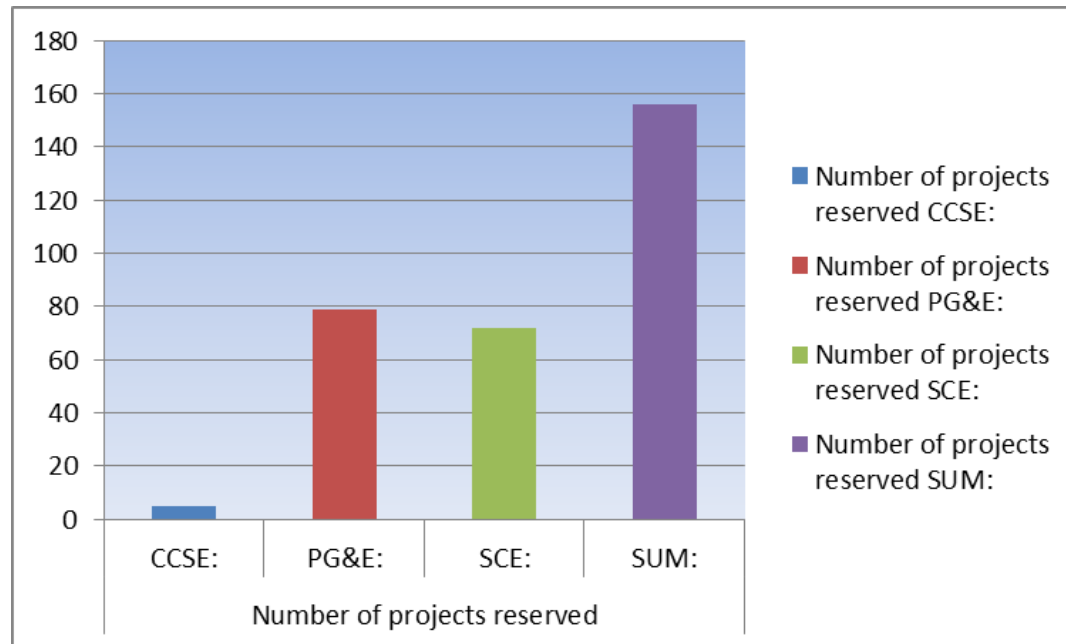
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## Capacity Statewide: 9.1MW



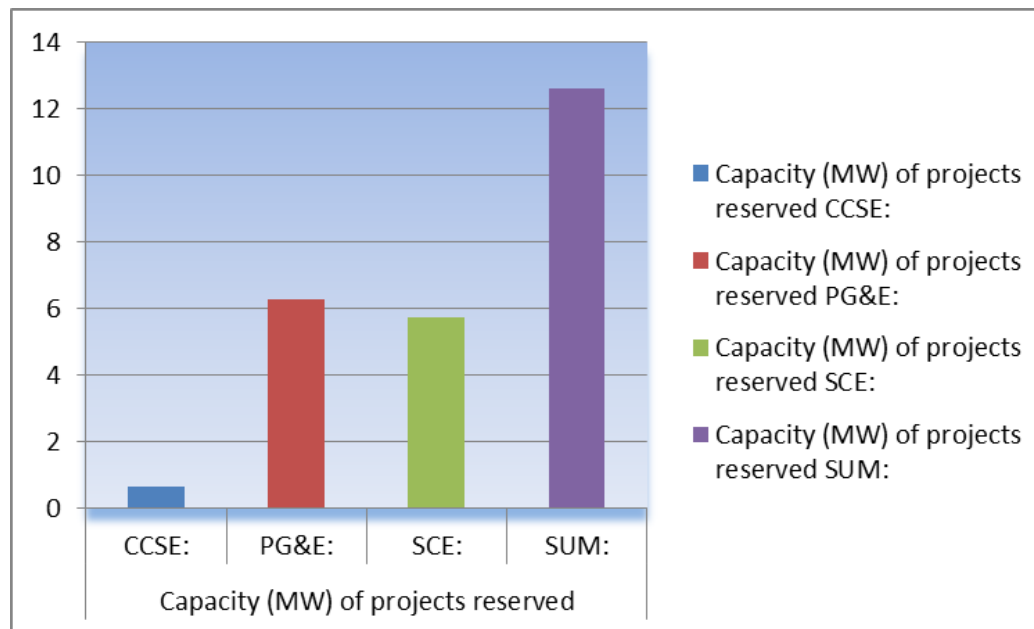
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## Reserved Projects Statewide: 156



# California **Solar** Initiative

## Capacity Statewide: 12.5MW



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# California **Solar** Initiative

## California Solar Statistics

MASH data will become available on  
[www.californiasolarstatistics.ca.gov/](http://www.californiasolarstatistics.ca.gov/)  
July 2012



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# California **Solar** Initiative

## CCSE MASH Program Contact Info

### **CCSE**

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### **PG&E**

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### **SCE**

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# CSI-Thermal Program



# California **Solar** Initiative

## Agenda

- CSI-Thermal Metrics
- Low-Income CSI-Thermal Program Launch
- Proposed Decision - Inclusion of Other Thermal Technologies
- CALSEIA PTM- Incentive Increase
- Statewide Marketing Launch
- Q&A



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# California **Solar** Initiative

## CSI-Thermal Metrics

[www.csithermal.com/public\\_export](http://www.csithermal.com/public_export)

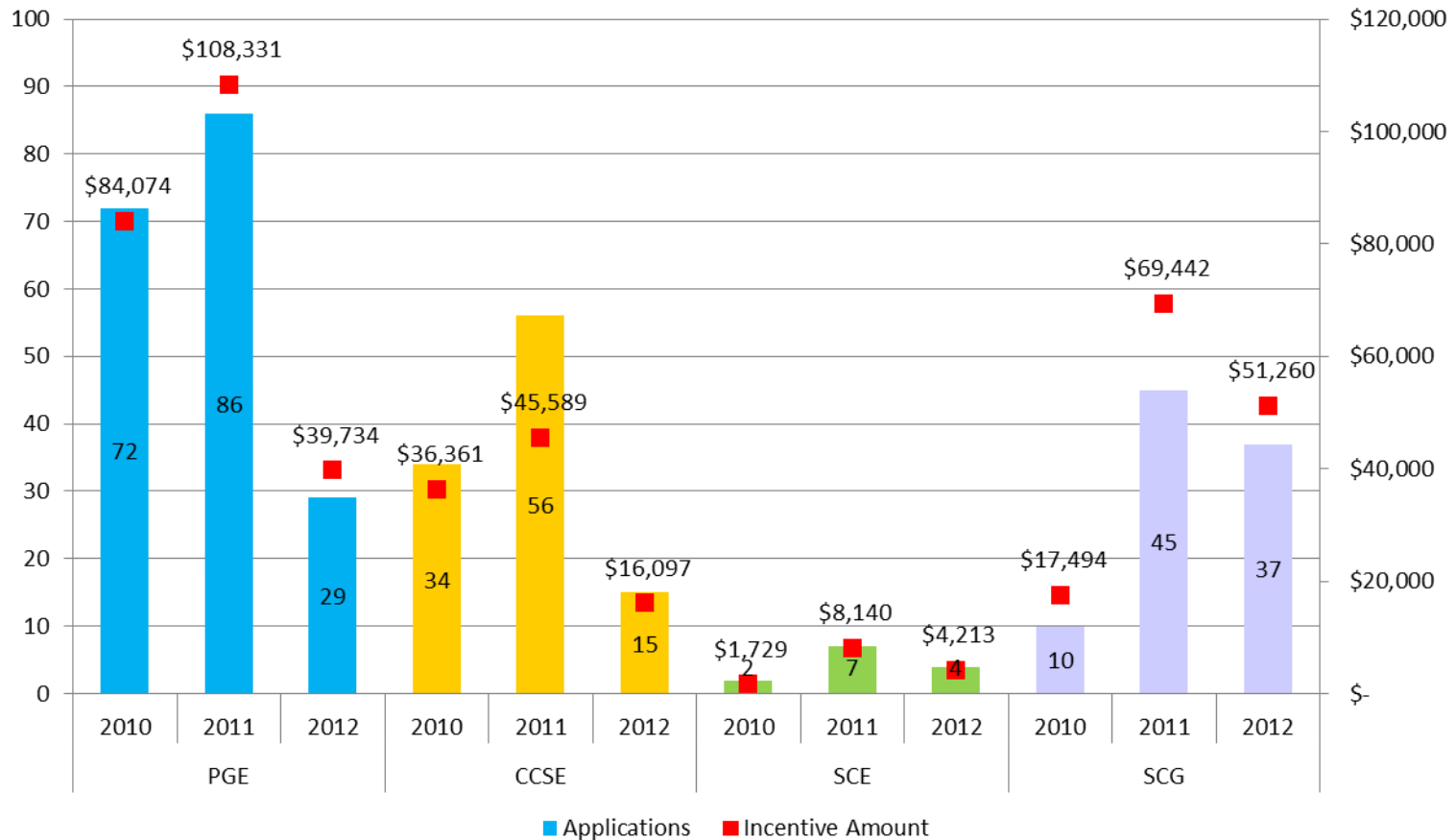


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# California Solar Initiative

## Residential Application Volume



Data from Program Inception – May 14, 2012 (Residential Received)



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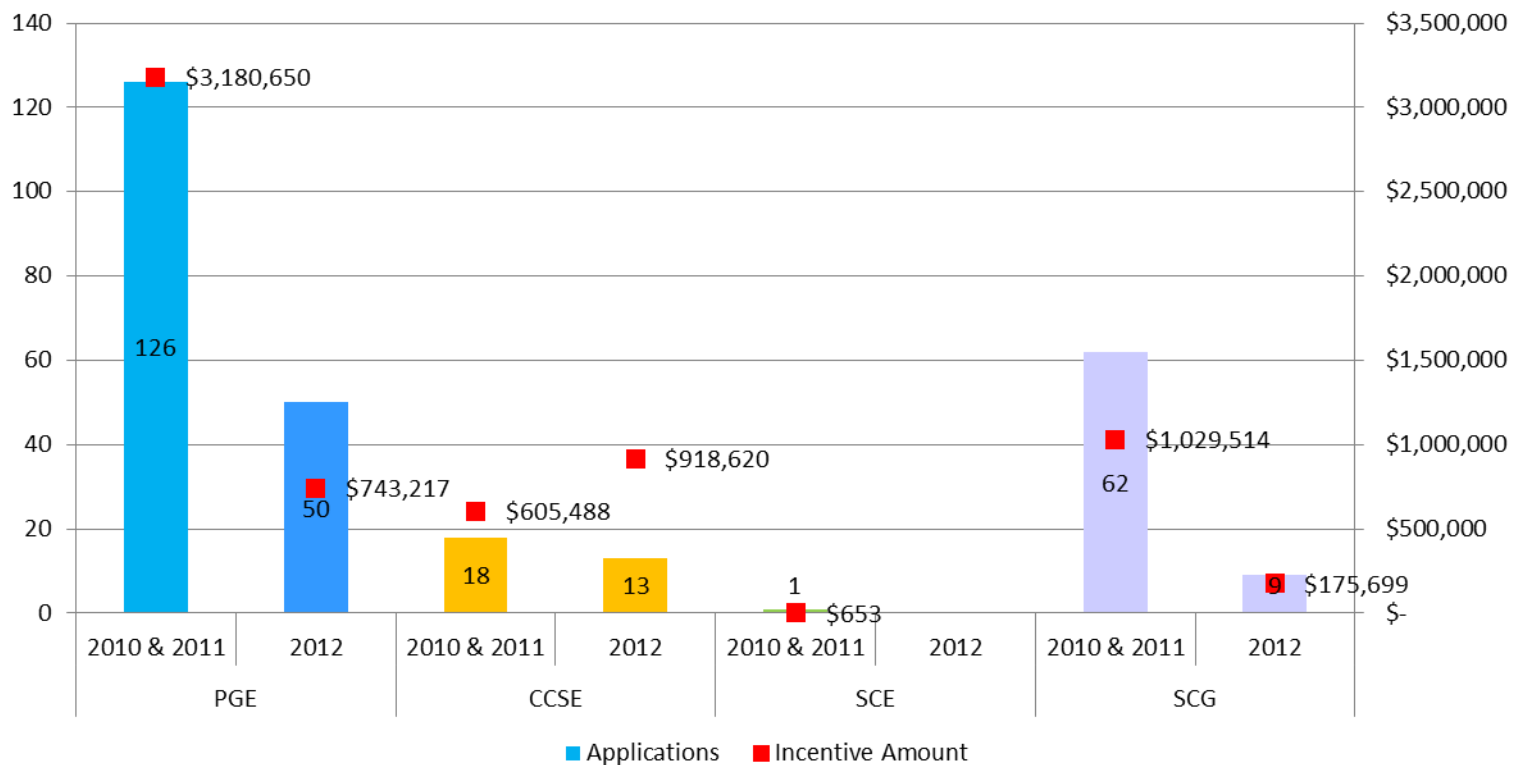


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## Commercial/Multifamily Application Volume



Data from Program Inception – May 14, 2012 (Non-Residential Received)



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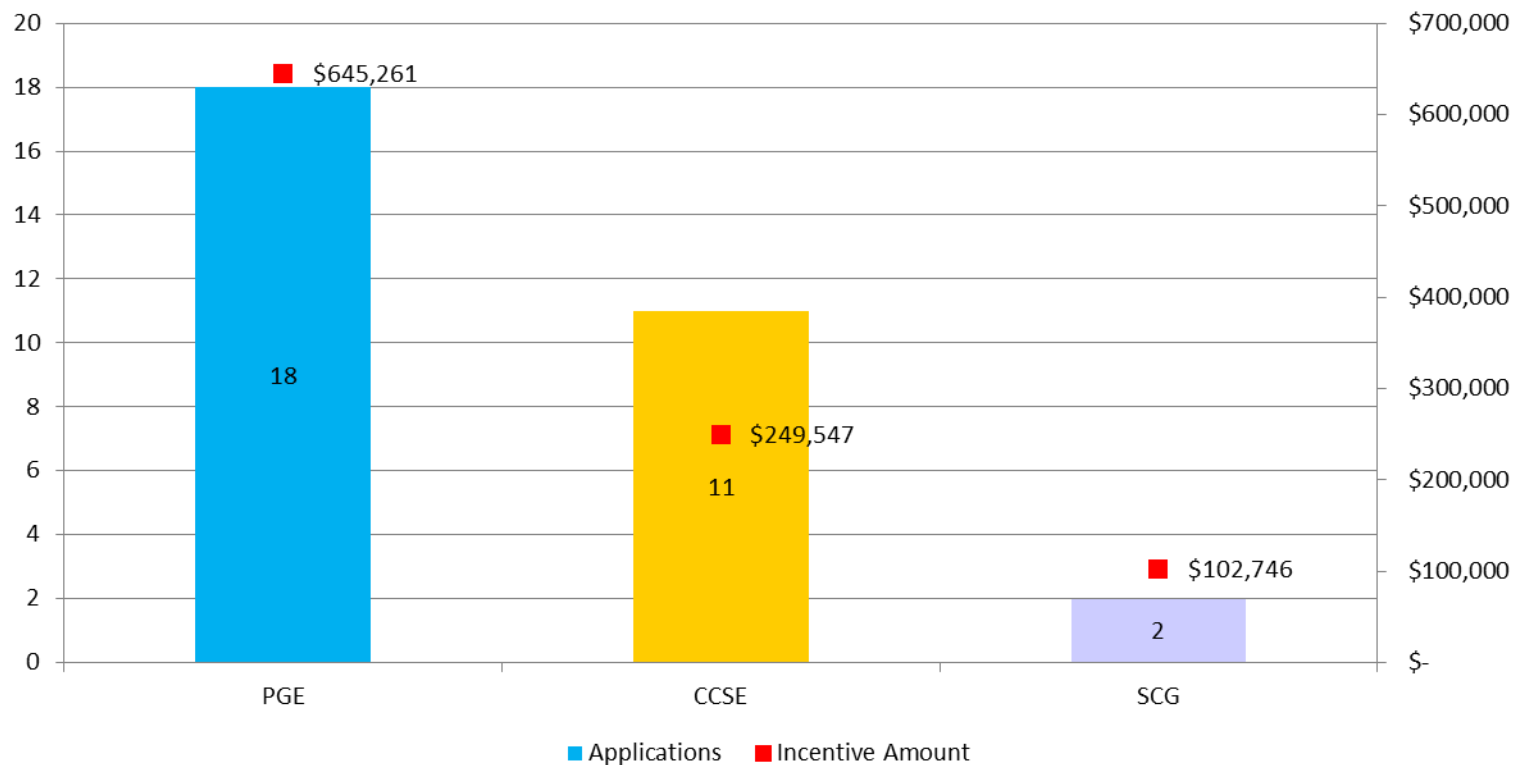
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# California Solar Initiative

## Low-Income Multifamily Application Volume



Data from Low Income Program Inception – May 14, 2012 (Multifamily Residential Received)

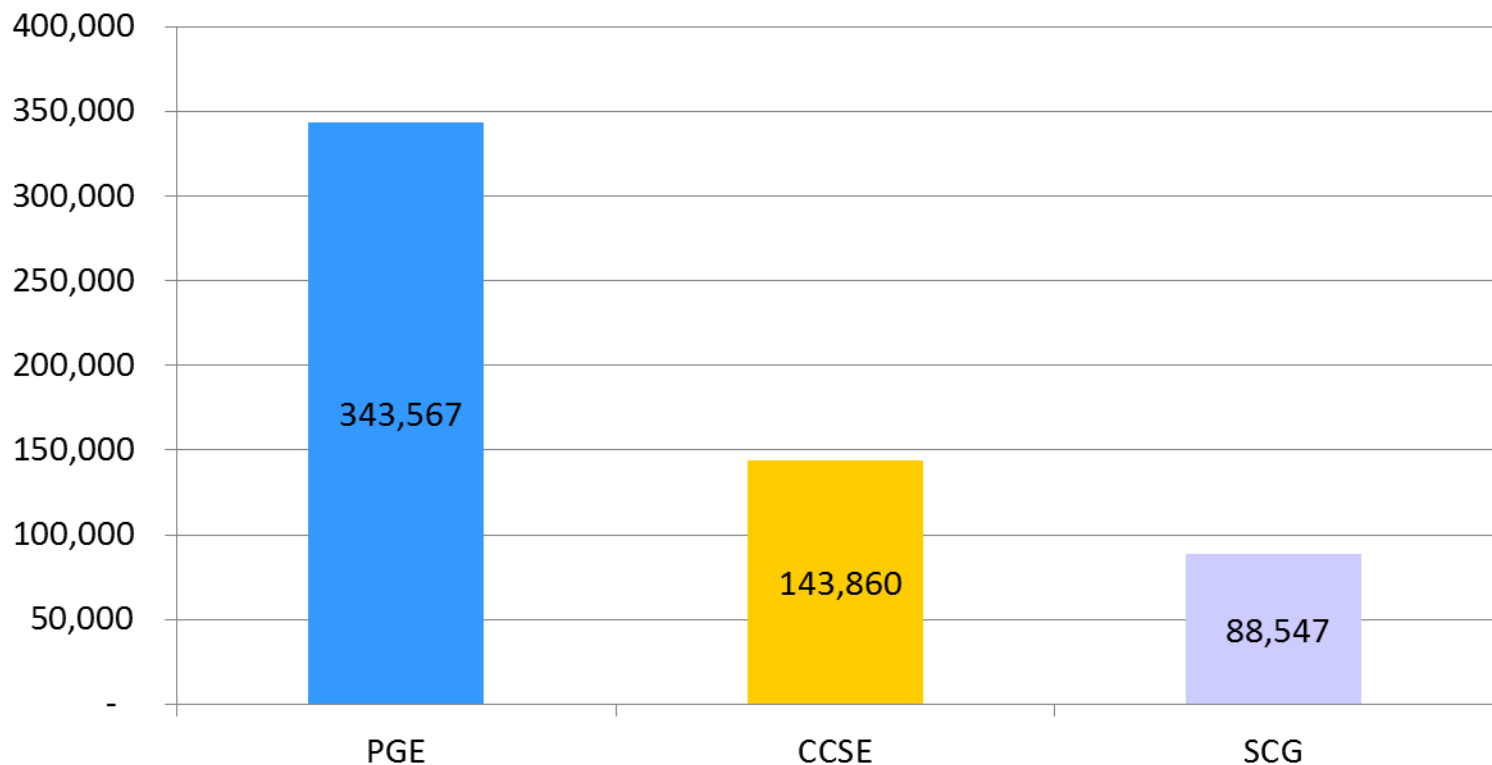


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# California Solar Initiative

## Expected Annual Therm Savings



Data from Program Inception – May 14, 2012 (Residential & Non-Residential Received)



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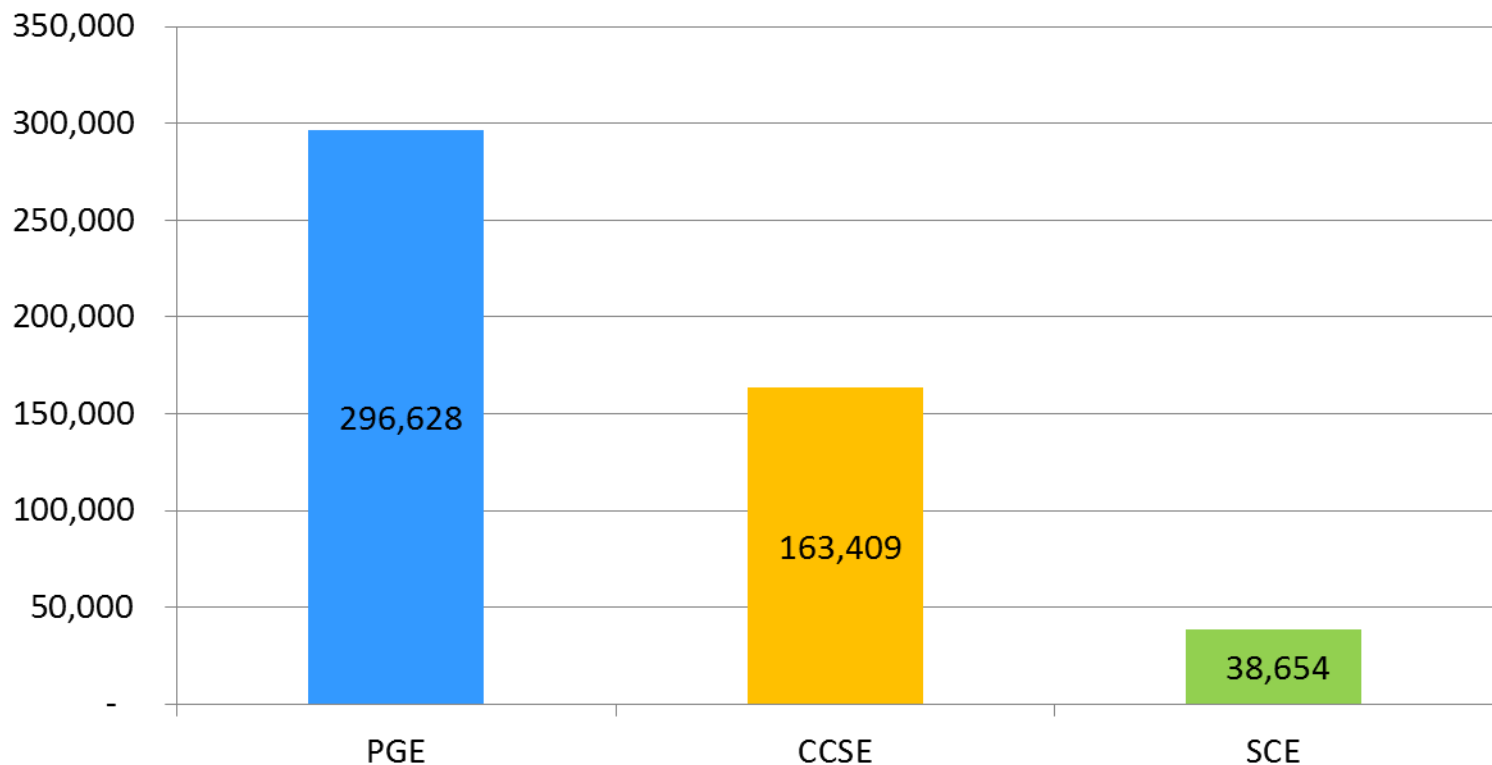


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# California Solar Initiative

## Expected Annual kWh Savings



Data from Program Inception – May 14, 2012 (Residential & Non-Residential Received)



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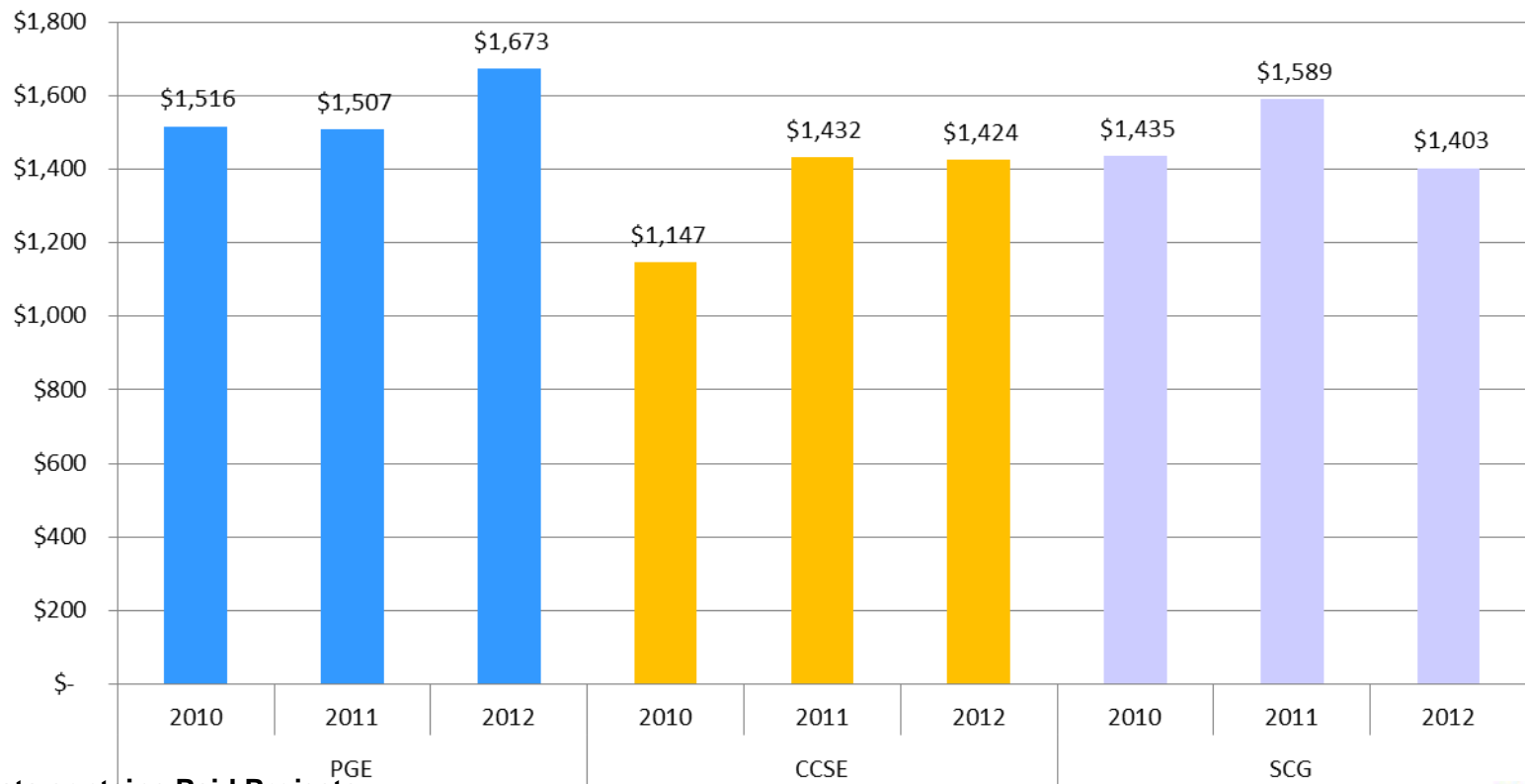


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## Avg Incentive: Single-family Residential Natural Gas



Data contains Paid Projects



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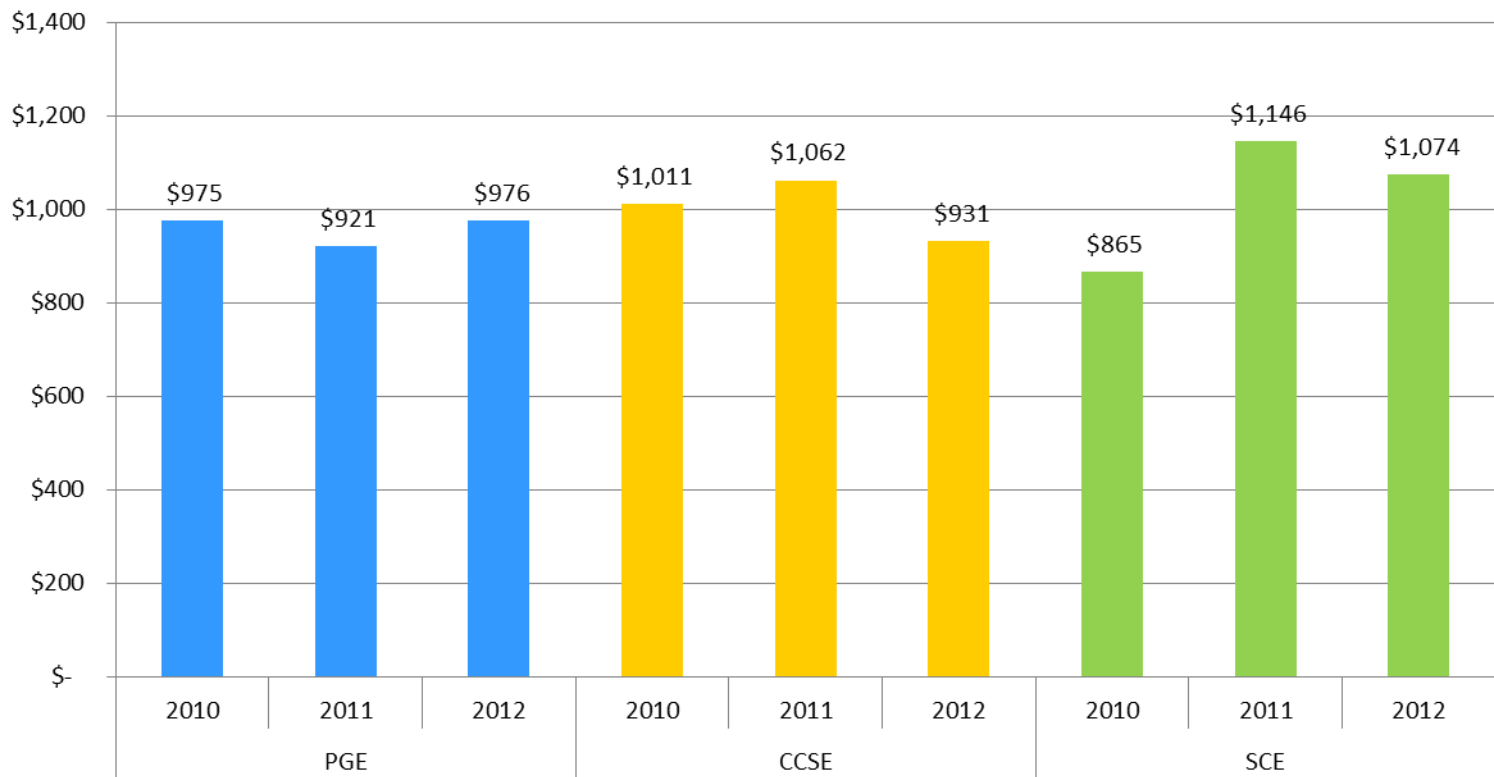
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# California Solar Initiative

## Avg Incentive: Single-family Residential Electric



Data contains Paid Projects



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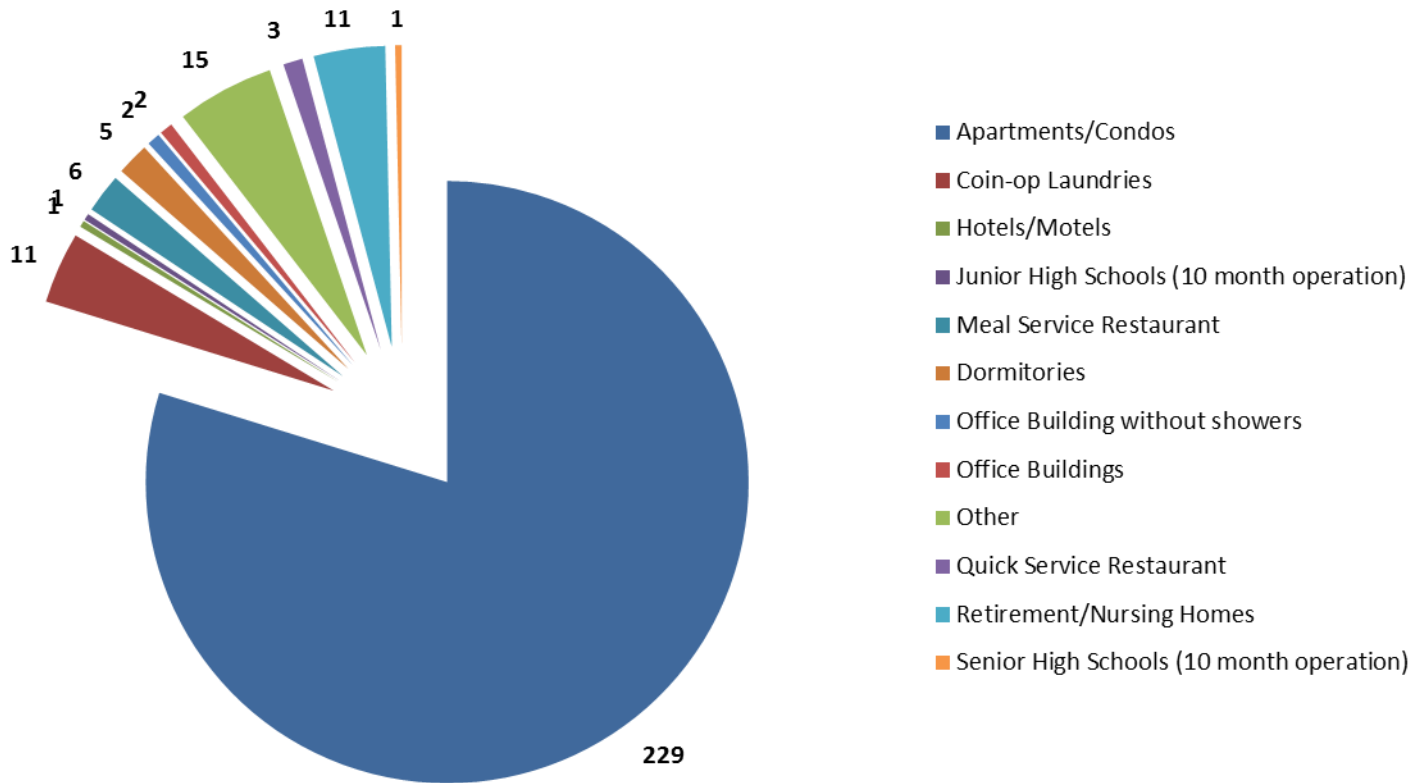


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# California Solar Initiative

## Commercial/Multi-family Distribution



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# California Solar Initiative

## CSI-Thermal Tracker

- Monitor available funding in each step (Live)
- Monitor allocated incentive totals by:
  - Program Administrator
  - Customer Class (res vs. commercial)
  - Fuel Type (natural gas vs. electric/propane)
- Helpful when approaching a decrease in incentive step level
- Available at: [www.csithermal.com/tracker](http://www.csithermal.com/tracker)



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# California **Solar** Initiative

## Low-income CSI-Thermal Program Launch



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# California Solar Initiative

## Low-income

- \$ 25 Million dedicated incentives
- Natural Gas water heating customers only
- Projects that have already received CSI-Thermal incentives are not eligible
- Launch Date: March 29, 2012
- Incentives will be calculated using the existing CSI-Thermal Calculators



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# California **Solar** Initiative

## Low-income Budget

PA	Budget Allocation	Total Incentive Budged (in millions)
PG&E	39.0%	\$9.75
CCSE	10.0%	\$2.5
SCG	51.0%	\$12.75
Total	100.0%	\$25

\*Incentive budget is separate from the \$180 million allocated for the mainstream CSI-Thermal Program.



# California **Solar** Initiative

## Low-income Incentive Structure (Single-family)

200% of current incentives

Step	Single-Family Low-income Incentive per therm displaced	Single-Family Low-income Projects Incentive Caps
1	\$25.64	\$3,750
2	\$20.52	\$3,000
3	\$15.38	\$2,250
4	\$9.40	\$1,376



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# California **Solar** Initiative

## Low-income Incentive Structure (Multi-family)

150% of current incentives

Step	Multi-family Low-income Incentive per therm displaced	Multi-Family Low-income Projects Incentive Caps
1	\$19.23	\$500,000
2	\$15.39	\$500,000
3	\$11.53	\$500,000
4	\$7.05	\$500,000



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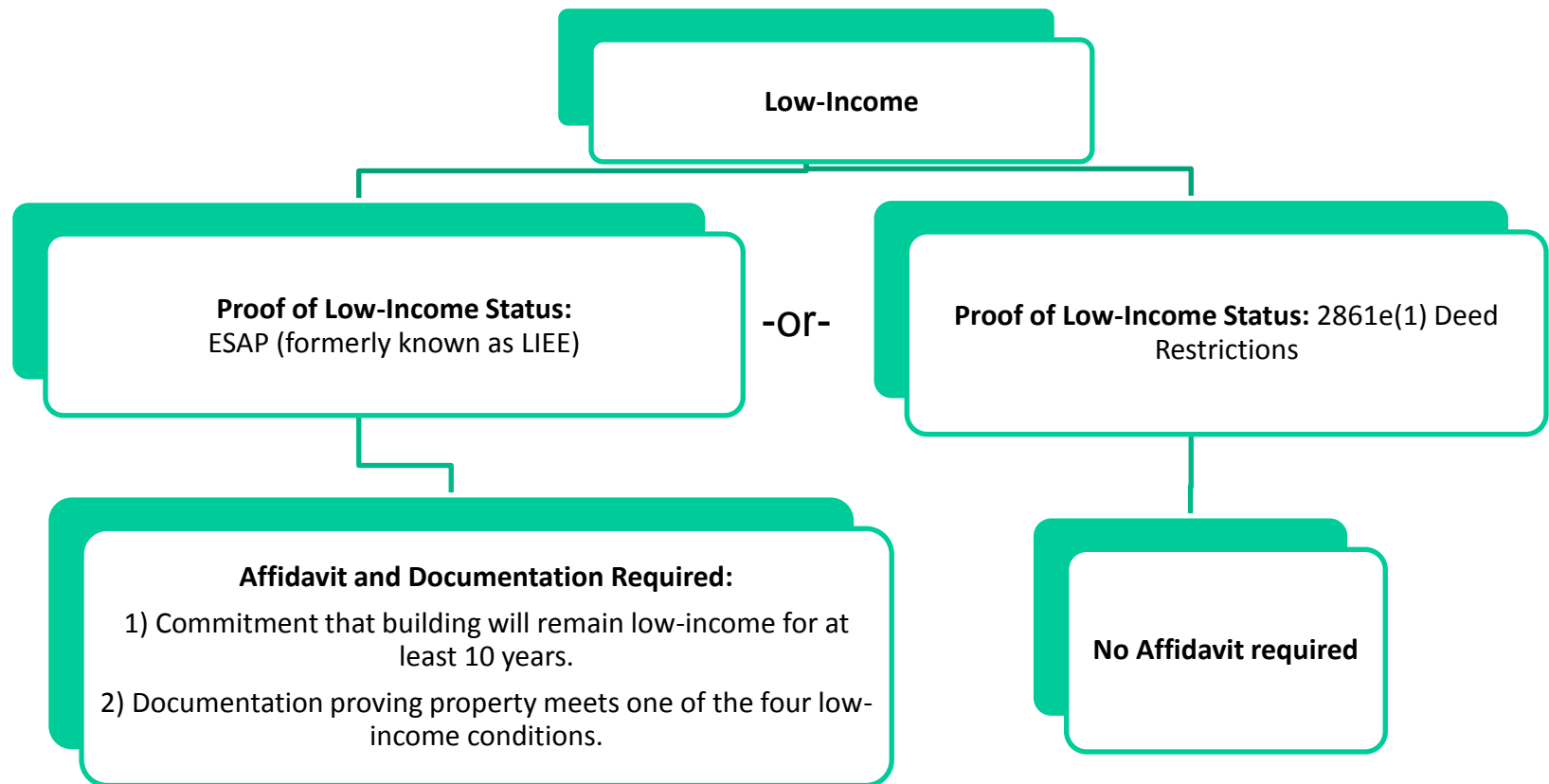
## Single-family Low-income Eligibility

- The host site must be occupied by the homeowner and/or applicant
- System must be owned by the homeowner
- Registered in a Commission approved and supervised gas corporation Energy Savings Assistance Program (ESAP); or
- If occupied by renters, meeting PUC 2861 (e) requirements
- The property will be required to remain low-income for at least 10 years from the time of the SWH system installation



# California **Solar** Initiative

## Single-family Low-income Process





# California Solar Initiative

## Multi-family Low-income Eligibility

- The benefits of the SWH system must be passed to the low-income residents through reduced energy costs
  - Applicant will need to provide an Affidavit explaining tangible reasons how this will be achieved
- Property Must meet one of the following:
  - Definition of low-income residential housing in Public Utilities Code (PUC) Section 2861(e); or
  - At least 50 % of all units in the multi-family housing structure are occupied by ESAP participants

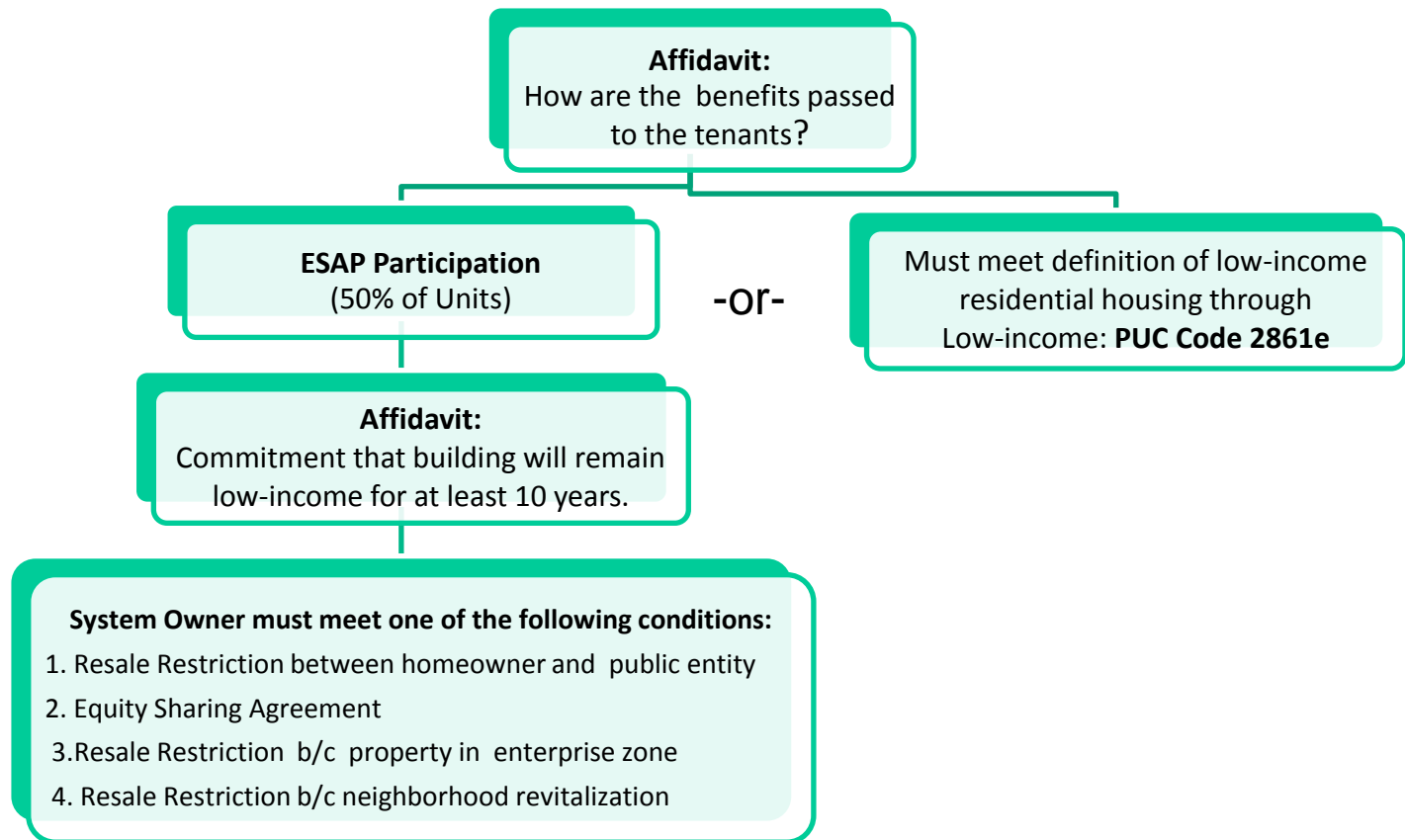


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# California **Solar** Initiative

## Multi-family Low-income Process



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# California **Solar** Initiative

## Proposed Decision - Inclusion of Other Thermal Technologies

- Solar thermal end-uses that are currently ineligible:
  - Solar space heating
  - Solar cooling/chilling
  - Process loads where heated water is used as a medium
  - Residential combi-systems
- Potentially changing to PBI Structure



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# California Solar Initiative

## CALSEIA PTM- Incentive Increase

- California Solar Energy Industries Association (CALSEIA) filed a PTM the Decision- January 30, 2012
- CALSEIA reasons that the existing incentive structure has been insufficient to drive participation in the program adequate to meet the program goals
- The Petition for Modification asks the CPUC to revise the incentive structure, proposing :
  - Increase of residential incentives by 100%\*
  - Increase of commercial incentives by 30%\*
- Responses to the PTM were due February 29; the PAs filed a joint response
- CALSEIA subsequently filed a Reply to the Responses on March 12
- To date, the staff has yet to release a final Decision regarding this PTM

\*In Step Level 1



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# California **Solar** Initiative

## Marketing and Outreach Updates



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# California Solar Initiative

## Goals

The goals of the Statewide Market Facilitation Plan are to work in conjunction with the Local Market Facilitation Plans to build awareness and increase understanding of:

- Solar water heating and the California Solar Initiative – Thermal Program
- Solar water heating technology
- The advantages and availability of CSI-TP rebates
- The advantages of adopting streamlined permitting processes, minimal fee structures and financing solar hot water systems to increase the number of rebate applications statewide.



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# California **Solar** Initiative

## Strategies

- Conduct pre-campaign research to assess consumer awareness and understanding of SWH technologies
- Establish metrics for goals
- Develop and implement statewide paid and earned media campaigns
- Participate in local consumer, trade and community outreach events
- Conduct and assess post-campaign research to track and evaluate changed awareness levels, attitudes and behaviors



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# California **Solar** Initiative

## Target Markets

- Commercial enterprise operators
- Industrial facilities managers
- Multifamily property owners
- Single-family residence homeowners
- Contractors and installers



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# California Solar Initiative

## Tactics

- Develop campaign plan that delivers cross-platform messaging to various customer segments through multiple touch-points:
  - Internet Landing Page
  - Broadcast and Cable TV
  - Broadcast Radio
  - Internet Streaming Radio
  - Digital Display Advertising
  - Search Engine Marketing
  - Experiential Marketing
  - Earned Media/Press Coverage



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# California Solar Initiative

## Key Dates/Milestones

- February, 2011 – RFP issued for Statewide Marketing Agency
- June, 2011 – Statewide Marketing Agency Selected
- August, 2011 – Statewide and Local M&O Plans presented by Program Administrators at Public Workshop in San Francisco
- August, 2011 – Advice Letters for Statewide and Local Plans filed for approval
- October, 2011 – Statewide and all Local Plans approved





# California **Solar** Initiative

## Key Dates/Milestones

- October, 2011 – March, 2012 – Creative development, Media & PR planning
- March/April, 2012 – Pre-campaign research conducted
- April, 2012 – Campaign launch with theme:  
“Solar Water Heating: The Next Step in Your Green Routine”



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# California **Solar** Initiative

## Campaign Launch Elements

- Internet Landing Page
  - WaterHeatedbytheSun.com
- Campaign Launch Press Release
  - English and Spanish Versions
- 30-second Television Commercial
  - “NBC/Green is Universal” Project Sponsorship on NBC-owned Stations in Los Angeles, San Francisco, and San Diego Markets
  - Broadcast and Cable in Los Angeles, San Francisco, & San Diego Markets as well as Sacramento, Bakersfield, Palm Springs, and Santa Barbara Markets



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# California **Solar** Initiative

## Campaign Launch Elements

- Residential-themed Internet Banner Ads
  - Targeted Websites
- “Google” Word Search Ads
  - Targeted Search Terms
- Pandora Internet Radio Ads
  - Targeted Listeners



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# California Solar Initiative

## Campaign Launch Elements

- 60-second Radio Advertisement with a Residential Theme
  - Los Angeles, San Francisco, and San Diego Markets
  - Sacramento, Bakersfield, Palm Springs, and Santa Barbara Markets
- 60-second Radio Advertisement with a Business Theme
  - Los Angeles, San Francisco, and San Diego Markets
  - Sacramento, Bakersfield, Palm Springs, and Santa Barbara Markets



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# California **Solar** Initiative

## Press Coverage

- *Roseville Press-Tribune*
- KMAX-TV, Sacramento
- Solarserver.com
- KNCO-AM News/Talk Radio, Grass Valley
- KCRA-TV, Sacramento
- *Los Angeles Daily News*
  - *Torrance Daily Breeze, Long Beach Press-Telegram*
- KION-TV, Monterey



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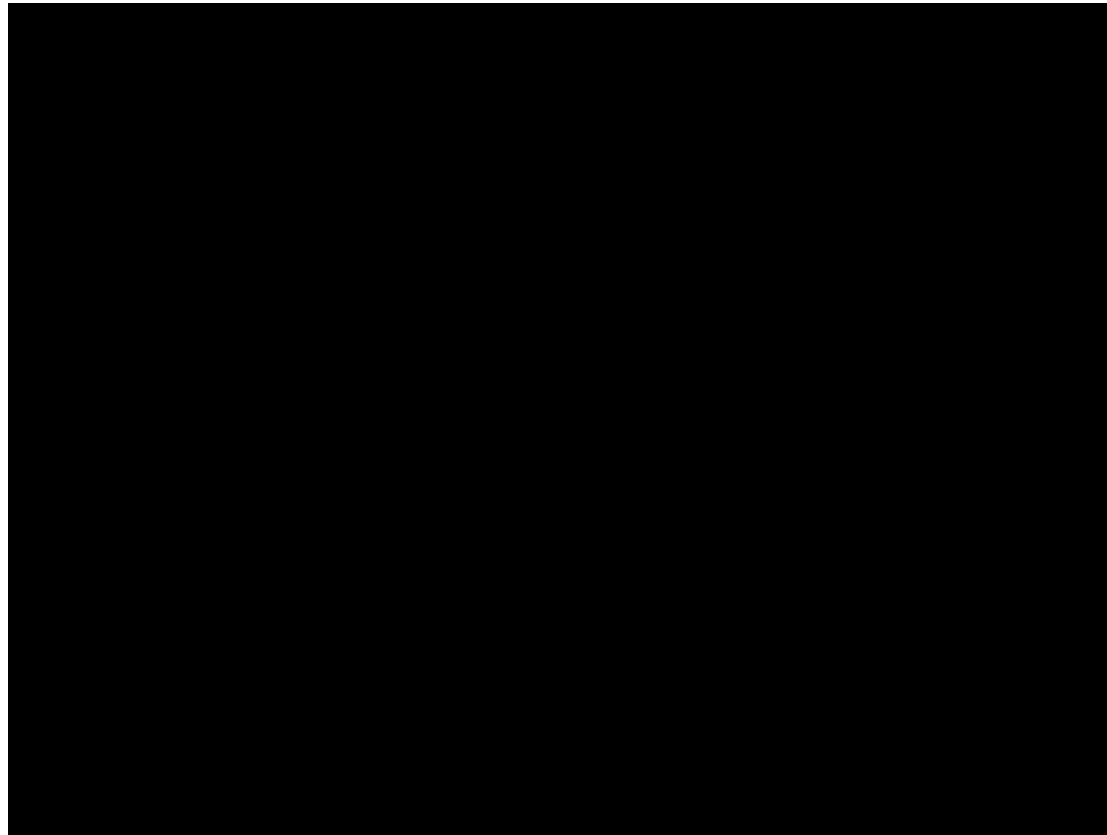




# California Solar Initiative

## Commercial

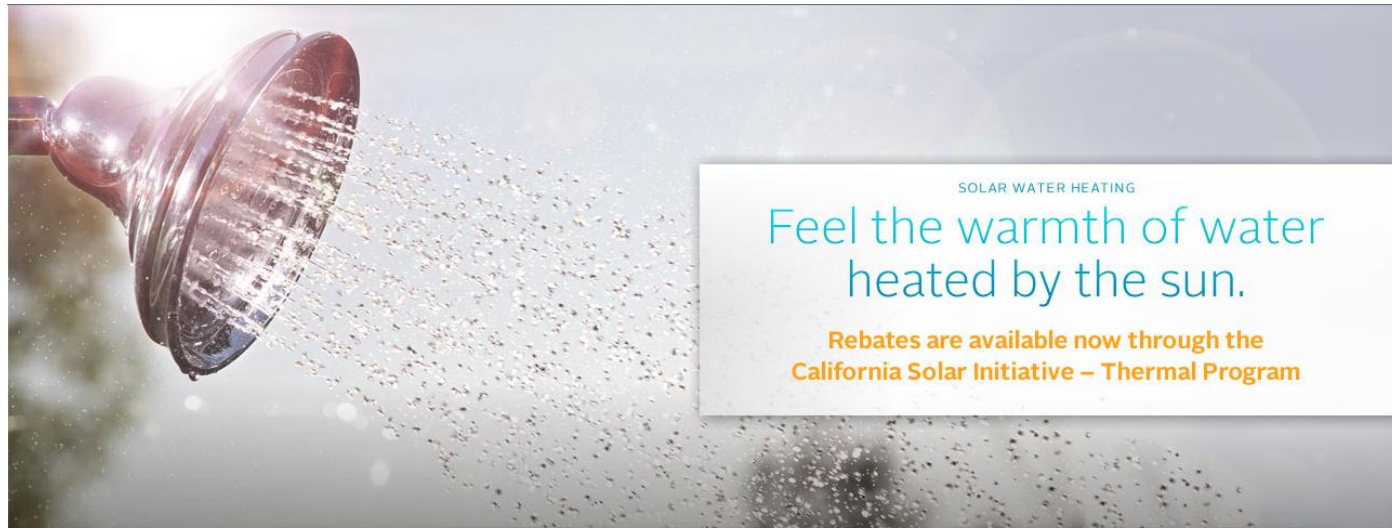
“Solar Water Heating: The Next Step in Your Green Routine”



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step: 1

Is your water heater natural gas, electric or propane?



Natural Gas



Electric



Propane

step: 2

Select your utility, then click **GO** for more information.



step 3: **GO**



# California **Solar** Initiative

## Q&A



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